

## IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), TRAINING SYSTEM, 315 MHZ

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**Training Category/Level Utilized:**

Ordnance/Level 3

**Logistic Responsible Command, Service, or Agency:**

PEO-STRI, Orlando FL

**Source and Method of Obtaining:**

Available through local TSC

**Purpose of Trainer:**

The IED Effects Simulator Increment 1 (IEDES 1) Training System is a Training Aids, Devices, Simulators, and Simulations (TADSS) kit that will assist the Army in training the joint and individual service on operational support tasks, conditions, and standards needed to achieve U.S. Military Improvised Explosive Device (IED) objectives. The IEDES 1 is designed to train key tasks of Explosive Hazards (EHs) defeat in support of full spectrum operations and conflicts including Homeland Security. EH defeat consists of the ability to predict, prevent, detect, classify, neutralize, mark, report, and record EH; and to protect personnel, equipment, and facilities from EH effects. The mission area also includes the requirement of acquisition of EH devices, for the purpose of exploiting emerging threat technologies, developing countermeasures, render safe procedures, techniques, and tactics, to mitigate emerging EH threats. The IEDES 1 is configured to simulate a Small, Medium, Large, and Extra Large explosive signature; however, it is not configured to pinpoint a specific IED.

The IEDES 1 provides the tools for trainers to create simulated battlefield cues and effects for a training audience. The forces must be trained and prepared to break-through or circumvent anti-access and area denial strategies. The Army requires the capabilities to predict, prevent, detect, and neutralize EHs, as well as protect personnel, equipment, and facilities from the effects of EHs. The IEDES 1 will enable joint force commanders to effectively train in the key tasks of IED threats. These capabilities are required throughout the full range of military operations, and throughout military, physical, and cultural environments.

This device will be further developed, and future capability improvements will occur in increments, as technical advances will allow.

**Functional Description:**

The major components of IEDES 1 (315 MHz) are:

- a. DVC 05-113 (MEU)

- b. DVC 05-113/1 (PD)
- c. DVC 05-113/2 (PPBT)
- d. DVC 05-113/3 (SV)
- e. DVC 05-115/1 (ECID 315 Mhz)
- f. DVC 05-116/1 (MCU 315 Mhz)
- g. DVC 05-117 (NPC)
- h. DVC 05-118 (PSSD)
- i. DVC 05-118/1 (NPSSD)

IEDES 1 training system utilizes an ECID and MCU that can be used with both pyrotechnic and non-pyrotechnic signature devices. The non-pyrotechnic devices can be used for indoor and outdoor training exercises. The NPSSD is scalable to replicate small to large IED signatures. The PSSD is used for outdoor, dismounted and mounted training exercises, and is scalable to replicate small to extra large IED signatures. Sufficient flash/bang/heat signature or other visual signature effects realistically replicate combat situations. When incorporated, an MEU device emits the appropriate MILES kill code to affect training personnel and equipment when IEDES 1 Pyrotechnic or Non-Pyrotechnic devices are triggered. Other operational features include the following:

- a. The IEDES 1 provides visual and aural force-on-force and force-on-target engagement simulations to obtain feedback on the effects of IED engagement simulations on personnel, independent targets, and combat vehicles in support of Explosives Hazards Defeat (EHD) training objectives.
- b. The IEDES 1 training system utilizes multiple safety features to prevent unintentional detonation of signature devices.
- c. Only government type classified munitions M30, M31A1 are used with the PSSD.
- d. Wireless communication is within a Government approved radio frequency range in accordance with the Army spectrum management frequency authority for the geographical location, and in compliance with DoD spectrum management policies and procedures for CONUS and OCONUS locations.
- e. Emits MILES codes IAW PMT 90-S002J to replicate kill effects and target pairing.
- f. IEDES 1 operating in wireless mode can be disabled by CREW training devices.
- g. IEDES 1 is capable of being used during periods of reduced visibility and darkness within the capabilities of the signature device being used.

#### **Physical Information:**

NOTE: Dimensions and weights of major components (see Functional Description) are identified under their respective Device Numbers.

The IEDES 1 training system is packaged in a total of (7) seven transit cases identified as follows: (weights identified include transit case and IEDES 1 components)

<b>Transit Case</b>	<b>Case Contents</b>
1. A-1	Non-Pyrotechnic
2. A-2	Non-Pyrotechnic
3. A-3	Non-Pyrotechnic
4. A-4	Non-Pyrotechnic
5. A-5	Non-Pyrotechnic
6. B-1	Pyrotechnic
7. Consumables Kit	Non-Pyro Consumables

<b>Case Dimensions</b>	<b>Total Case Weight</b>
1. 49"x 25"x 24"	Weight: 188.5 lbs.
2. 49"x25"x24"	Weight: 188.5 lbs.
3. 49"x25"x24"	Weight: 191.3 lbs.
4. 49"x25"x24"	Weight: 136 lbs.
5. 49"x25"x24"	Weight: 185.5 lbs.
6. 49"x25"x24"	Weight: 127.5 lbs.
7. 25.5"x 25.5" x 13.25"	Weight: 73 lbs.

#### **Equipment Required, Not Supplied:**

M30 and M31A1 pyrotechnic cartridges for PSSD

**Special Installation Requirements:**

None

**Power Requirements:**

NOTE: The power requirements of major components (see Functional Description) are identified under their respective Device Numbers.

**Applicable Publications:**

Operators Manual: 05-6920-703-10

System Maintenance Manual: 05-6920-703-24& P

**Reference Publications:**

None

**Training Requirements Supported:**

Individual Training: Any MOS with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.